



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Professor WEINEK from negatives of the Moon made at the LICK Observatory. The beautiful illustrations to the volume have been presented to the Observatory by WALTER W. LAW, Esq.

E. S. H.

A PROPOSED ASTRONOMICAL CONGRESS AT THE MIDWINTER FAIR.

A circular proposing an Astronomical Congress to be held in San Francisco during the Midwinter Fair was sent out by Mr. WM. M. PIERSON, Chairman of a Special Committee, on February 10, 1894. It is understood that the project has been dropped, on account of insufficient support. The officers of the LICK Observatory were ready to do their part.

E. S. H.

THE FIRE-BALL OF FEBRUARY 1, 1894.

At 10^h 07^m P. M., my attention was attracted by a bright light towards the east, which proved to be a magnificent fire-ball. It appeared between 35° and 40° above the eastern horizon, in the constellation *Leo*. It swept towards the horizon, inclining towards the north at a small angle, and burst about 10° north of east, amid streamers of very light haze near the horizon, which gave it a weird, violet color, the color being blue when first seen, higher up. Its motion was slow, occupying two or three seconds in its descent, leaving scarcely any train, all traces having disappeared in eight or ten seconds. It is very difficult to properly judge of the light given by these objects, but this was certainly as bright, when it burst, as the full Moon, but not so large. No sound of any explosion was heard. I noted as carefully as possible the point at which it disappeared, and a subsequent determination gave the position of this point as 10° north of east, with probably an error of less than 5°. The position of the point of disappearance is considerably better determined than that of the appearance. This fire-ball was seen at many places in this State and Nevada, and appears to have been one of the most brilliant ever seen on this coast. Information was requested from a number of persons who witnessed the phenomenon, and the following extracts are made from answers received and from voluntary reports:

Professor C. W. TREAT, Napa College, Cal., says: "The meteor was observed at about 10^h 02^m P. M., Pacific Standard

Time (the error may be as much as 2^m). It appeared about 15° or 20° above the horizon, to which it descended almost vertically, passing behind the hill (7° or 8° high) *directly in the east*, as determined by measurement the next morning (error certainly less than 5°). Its motion was slow and probably occupied two seconds, the glow in the heavens lasting some ten seconds after the meteor disappeared. A very strange thing in reference to it is, that at some little distance above the hill its path seemed to widen out for an instant and then contract and widen again just before the meteor disappeared."

Professor C. W. FRIEND, Director Nevada State Weather Service, Carson City, Nev., says: "The meteor was not seen by myself, personally, but by several in this city, but their reports are so conflicting that it is considered best to take the following from Mr. A. M. ASHBY, our voluntary observer at Candelaria, Nev.:

" "On or about 10^h P. M. (one authority at Columbus says $10^h 05^m$ P. M., another at this place $10^h 09^m$ P. M.) a very vivid blue-white light appeared in the south. This light lasted one second or a little more, and was followed in about thirty seconds by a loud explosion which shook hanging lamps and rattled crockery in the racks. The sound of the explosion came from the north. This explosion was immediately followed by a loud roaring, which gradually died away in a north-northeast direction, and which lasted about one minute and forty seconds. This roaring had exactly the same sound as the passage of a shell from a heavy gun has through the air. I did not see the meteor itself, but observed the rest.' "

Mr. JOHN SWINDELL reports from Belleville, Nev., as follows: "About 10^h P. M. a large brilliant meteor passed over within one-quarter of a mile of this place from east to west. I was on the east side of the roundhouse and it appeared to pass directly over, as I had to look straight up to see it. I stepped quickly around the end of the house, about 40 feet, and caught a good glimpse of it just before it disappeared between this station and the mountains. It was immediately followed by a loud explosion."

Mr. F. FORBUSH, Santa Barbara, Cal., reports: "It gave out more light than the full Moon. The color was a bluish pearl. No explosion was heard at this place. It disappeared at a point on the mountains (about 4500 feet high and about 6 miles

distant) north 13 west true meridian, from where I stood on State Street. The meteor moved from the east to the west, but it was so close to the tops of the mountains when I first saw it that it is impossible for me to give the angle at which it struck the earth. The light remained more than two seconds after the meteor disappeared."

Professor JOSIAH KEEP, MILLS College, Cal., reports: "It appeared only a few degrees above the northeast horizon, but it lighted up the landscape in a marvellous manner; I should say it was equal to the brightest moonlight. The whole phenomenon took no more than three seconds. The motion of the meteor was very rapid and nearly vertical to the horizon."

The meteor was also reported by Mr. J. B. PIERCE, 904 Powell Street, San Francisco, as visible about 10^h 5^m P. M., east of Mount Diablo.

Extensive reports were published in the newspapers, from which the following essential points are selected. At Candelaria, Nev., the light was so bright as to cause much excitement, and was followed in thirty seconds by the sound of the explosion, and in three or four minutes by a "loud, crashing noise."

At Carson City, Nev., it was seen in the southeast.

At Belleville, Nev., it was seen in the east about 10^h 10^m P. M., and moved towards the west. "The illumination lasted fully a minute. Near the meteor's path were heard loud explosions about two minutes after its passage, these detonations lasting three minutes. The thermometer fell from 30° to 20° in less than twenty minutes."

At Virginia City, Nev., it passed from the northern to the southern horizon, and was visible from three to five seconds, a hissing sound being heard.

At Keeler, Cal., the meteor was seen to the north.

The explosion was heard at Belleville and Soda Springs, Nev., 6 and 15 miles respectively, north of Candelaria, but not at Hawthorne, 60 miles north, nor Bodie, Cal., 70 miles northwest. At Fish Lake, 30 miles southeast, nothing was heard. At Bishop Creek, Cal., 60 miles southwest, a faint rumbling was heard.

From these observations and reports it is impossible to locate its fall with any degree of accuracy. Professor TREAT's and my own observations show that it disappeared in about the latitude

of Candelaria which accords well with the reports that it passed directly over this point, but these observations are not sufficiently accurate to determine its longitude. Mr. FORBUSH's observations would indicate that it fell about the center of the San Joaquin Valley to the east of the LICK Observatory, but this is improbable. It probably fell in the wild and uninhabited mountains to the west of Candelaria, Nev., and may never be located. Searching parties went out stimulated by the rewards offered, but, up to the present time, no report of any find has been received.

C. D. PERRINE.

MOUNT HAMILTON, March 5, 1894.

A LETTER FROM PROFESSOR NEWTON ON THE CANDELARIA
METEOR OF FEBRUARY 1, 1894.

“MY DEAR PROFESSOR HOLDEN :

“I am very much obliged to you for the advance manuscript copy of Mr. PERRINE's interesting report of observations of the Candelaria meteor of February 1, and for your invitation to add thereto, if I wish, comments of my own. The accounts are conflicting, as Mr. PERRINE says, and they cannot all be satisfied by any assigned path of the meteor. This is usually the case with meteor observations, and attempts to reconcile conflicting statements are often an entire failure. Men frequently combine what they *see* of the meteor path with what they *infer* about it in such manner that we cannot separate the two. But I think some trustworthy and valuable conclusions can be gotten from the accounts so carefully collected by Mr. PERRINE, and the meteor was of such an extraordinary character that it is worth while to deduce all we can from the stories. Allow me first, however, to add thereto an interesting account of the meteor, taken from a letter to me from Mr. CHARLES A. KING of Candelaria. He says :

“‘I will describe what I saw and heard. I live at the railroad depot, a mile from town and 500 feet above it. At 10^h 7^m P. M. (railroad time), February 1, sky clear and cloudless, thermometer 16° above zero, a brilliant white flash of light coming from the west illuminated the whole sky. So bright was it that the flame of a lamp by which I was reading appeared dim as it would in sunlight. As near as I could judge, ten seconds after the flash was a deafening explosion, of a crashing, tearing nature, but very brief. This was followed by a rumbling sound resembling a train.